

Remarks

Claims 1 through 16 and 22 through 32 are now pending.

Claim 21 has been cancelled as being duplicative of claim 9.

The Rejections

It is believed that the Examiner's informality based objections to the Title and Abstract and Claim 1 have been remedied by appropriate revisions.

Claims 3, 10 through 13, 15, 21 through 25, and 27 have been rejected under 35 U.S.C. Section 112, second paragraph, as being indefinite. It is believed that revisions made to the rejected claims under 35 U.S.C. Section 112, second paragraph, other than claim 21, are responsive to the Examiner's rejections.

A reconsideration of the rejection of claim 21 under 35 U.S.C. Section 112, second paragraph is requested in view of comments provided herein. In particular, claim 21 has been cancelled as being duplicative of claim 9 and a substance of this response is directed to claim 9 as being representative of cancelled claim 21.

Discussion

Historically, latices of elastomer particles are conventionally stabilized with a suitable surfactant to prevent their premature coagulation. At some point of time, the latex is later destabilized with an additive so that the elastomer particles in the latex coagulate and are thereby recovered.

The Applicants' claim 1 accordingly relates that the pre-formed elastomer particle-containing latex is stabilized by a cationic surfactant to which an aqueous mixture of water-swelling clay is added which contains cationically exchangeable ions in its galleries between said layers.

The Applicants' dependent claim 3 is directed to a plurality of events taking place which include a combination of ion transfer, destabilization of the elastomer latex and thereby

a destabilization of the elastomer particles, the migration of the elastomer particles into the galleries between the platelets of the swollen, intercalated clay to aid in forming polymer-bound platelets, a substantial exfoliation of the polymer-bound platelets within the elastomer host and coagulation of the elastomer particles from the destabilized elastomer latex.

Therefore it seems clear that the cationic surfactant is used to stabilize the elastomer particles in the latex so that they do not prematurely coagulate until the clay (containing the cationically exchangeable ions in its galleries) is added upon which the latex becomes destabilized and the elastomer particles then coagulate.

The subject of claim 9 (dependent from claim 1 and not from claim 3) represents a modification of the process of claim 1. In particular, for the process of claim 9, a (normal) latex stabilization amount of the cationic surfactant is added during the polymerization process to prevent a coagulation of the elastomer particles of the resultant latex (prematurely) prior to the addition of the specified clay which itself will thereby promote the coagulation effect indicated in process claim 1. For claim 9, the process of claim 1 is modified in the sense of adding additional cationic surfactant to enable an increased addition of the clay (for which the resultant coagulation then takes as provided for by claim 1 from which claim 9 depends).

It is believed that process of claim 9 involving the further addition of cationic surfactant which enables an effective further addition of the specified clay to therefore enable an increased exfoliated clay production, is particularly novel and a significant departure from past practice.

Therefore claim 9 is consistent with claim 1 from which it depends, as well as being consistent with claim 3 from which it does not depend, and sufficiently points out and distinctly claims the subject matter which the inventors regard as their invention in the sense of 35 U.S.C. Section 112, second paragraph.

Conclusion

In view of the amendments made to the claims and comments herein it is believed that the informalities relating to the title, abstract and claims and the rejection of various claims under 35 U.S.C. Section 112, second paragraph, as set forth by the Examiner have been addressed and Applicants submit that the application is now in condition for allowance.

Respectfully submitted,



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